

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	:	Customer Number: 46320
	:	
David KAMINSKY, et al.	:	Confirmation Number: 3989
	:	
Application No.: 10/663,125	:	Group Art Unit: 2152
	:	
Filed: September 16, 2003	:	Examiner: P. Lee
	:	
For: AUTONOMIC CLUSTER-BASED OPTIMIZATION	:	

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is submitted under 37 C.F.R. § 41.41 in response to the EXAMINER'S ANSWER dated December 22, 2008.

The Examiner's response to Appellants' arguments submitted in the Appeal Brief of November 12, 2008, raises additional issues and underscores the factual and legal shortcomings in the Examiner's rejection. In response, Appellants rely upon the arguments presented in the Appeal Brief of November 12, 2008, and the arguments set forth below.

REMARKS

Non-Compliant Examiner's Answer

On page 5 and 6 of the Appeal Brief, Appellants pointed out where the Examiner's Answer is required to include particular content discussed in M.P.E.P. § 1207.02, yet the Examiner has completely ignored this requirement in the Examiner's Answer. As noted throughout the prosecution of this application and in the Appeal Brief, the Examiner has failed to properly establish the facts underlying the Examiner's analysis. Appellants' position is that these omissions in the Examiner's prima facie analysis are correctable by the Examiner, and the correction of these omissions would help both Appellants and the Honorable Board gain a better understanding of the alleged findings of facts and analysis employed by the Examiner in rejecting the claims. Thus, Appellants respectfully request that the Honorable Board remand the present application to the Examiner to address these omissions.¹

Appellants have compared the statement of the rejection found on pages 4-7 of the Examiner's Answer with the statement of the rejection found on pages 3-6 of the Second Office Action. Upon making this comparison, Appellants have been unable to discover any substantial differences between the respective statements of the rejection. As such, Appellants proceed on

¹ The Board has persistently declined to uphold an Examiner because of omissions in the Examiner's half of the record. E.g., Ex parte Daleiden, Appeal 2007-1003 (Mar. 14, 2007) (remanding because examiner failed to respond to arguments in the Appeal Brief); Ex parte Rozzi, 63 USPQ2d 1196, 1200-03 (BPAI 2002) (remanding without decision because of a host of examiner omissions and procedural errors); Ex parte Gambogi, 62 USPQ2d 1209, 1212 (BPAI 2001) ("We decline to tell an examiner precisely how to set out a rejection."); Ex parte Jones, 62 USPQ2d 1206, 1208 (BPAI 2001) (refusing to adjudicate an issue that the examiner has not developed); Ex parte Schricker, 56 USPQ2d 1723, 1725 (BPAI 2000) ("The examiner has left applicant and the board to guess as to the basis of the rejection ... We are not good at guessing; hence, we decline to guess."); Ex parte Braeken, 54 USPQ2d 1110, 1112-13 (BPAI 1999) (noting that the appeal is "not ripe" because of omissions and defects in the examiner's analysis).

the basis that the Examiner's sole response to Appellants' Appeal Brief is found on pages 10-17 of the Examiner's Answer in the section entitled "Response to Argument."

Rejection under 35 U.S.C. § 103

In response to the arguments presented on page 7, line 24 through page 10, line 13 of the Appeal Brief, the Examiner responded in the paragraph spanning pages 8 and 9 of the Examiner's Answer. This paragraph is substantially identical to the Examiner's response in the twenty-second enumerated paragraph on page 8 of the Second Office Action with the exception of the following arguments:

Furthermore, Maltz teaches that the collected statistic (e.g., traffic data) is processed by a TMS Algorithm to determine the optimal network configurations for the network element (i.e., node) ([0036]) in a cluster (e.g., 300, fig. 3). This means the TMS Algorithm must detect (i.e., determine) that a node (i.e., network element) in the cluster (e.g., 300 fig. 3) needs to optimize the node's configuration based upon the processing of the collected traffic data/statistics in order to output the optimal network configuration for the node (requires re-configuration). (emphasis added)

Referring to the above-reproduced passage, the Examiner has mischaracterized the scope and content of the applied prior art. Paragraph [0036] of Maltz does not teach "determine the optimal network configurations for the network element," as alleged by the Examiner. Instead, paragraph [0036] teaches the following:

The TMS Algorithm 320 processes the collected statistics stored in the TMS Statistics Repository 310 and determines the optimal network configuration.

Referring to paragraph [0037], Maltz also teaches:

The TMS Statistics Collection and Signaling Servers 304, 305, 306 then send the information to the TMS Statistics Repository 310 (act 430). The TMS Algorithm 320 creates a traffic demand matrix using information stored in the TMS Statistics Repository 310 (act 440) and uses the traffic demand matrix to determine an optimal network configuration (act 450) in conjunction with the Network Topology Information. The TMS Signaling System 330 receives the network configuration from the TMS Algorithm 320 (act 460). After the TMS Statistics Collection and Signaling Servers 304, 305, 306 receive the network configuration from the TMS Signaling System 330 (act 470), the TMS Statistics Collection and Signaling Servers 304, 305, 306 configure each router R as appropriate (act 480). (emphasis added)

1 As evidenced by the teachings of Maltz reproduced above, Maltz is not concerned about
2 an optimal configuration for a node (i.e., allegedly disclosed by the network element). Instead,
3 Maltz is concerned about the optimal configuration for the network. Although not explicitly
4 asserted by the Examiner, the optimal configuration for a network does not inherently teach an
5 optimal configuration for a node, since an optimal configuration for a network does not
6 necessarily require an optimal configuration for a particular node. Thus, the Examiner's analysis
7 confuses the detecting of a node, as claimed, with Maltz's teachings, which are associated with a
8 network.

10
11 In response to the arguments presented on page 10, line 16 through page 12, line 7 of the
12 Appeal Brief, the Examiner responded in the paragraph spanning pages 9 and 10 of the
13 Examiner's Answer as follows:

14 **In reply** to argument (3), Maltz teaches data/statistics stored in the TMS Statistic
15 Repository 610 is used as an input to the TMS algorithm for generating optimal network
16 configuration ([0076] and [0033]). Maltz further teach the data/statistics stored is associated with
17 traffic information collected from the network element, such as traffic information that is collected
18 by measuring the number of bytes that flow out of a line card interface each second([0068]) (i.e.,
19 workload). Noted that the term "workload" is interpreted as amount of work produced (the number
20 of bytes that flow out of a line card interface) in a specific time period (e.g., each second). This
21 means the traffic data/statistics such as measurement of the number of bytes that flow out of a line
22 card interface each second (i.e., set of parameter associated with the workload) must be retrieved
23 from the TMS Statistic Repository 610 in order to be inputted to the TMS Algorithm as parameter
24 for generating optimal network configurations (i.e., set of parameter associated with the workload
25 retrieved for generating configuration, hence "the set of parameter associated with the workload"
26 is considered as "a set of configuration parameter"). Furthermore, Maltz teaches the generated
27 optimal network configuration based on the retrieved traffic data/statistics collected from the
28 network element (i.e., set of configuration parameters associated workload) is sent back to the
29 network element for re-configuration ([0127]). This means the network element is retrieving the
30 set of optimal network configuration generated from the traffic data/statistics (i.e., retrieving a set
31 of configuration parameters associated with the workload) in order to be used for re-configuration
32 of the network element (re-configuration of the node). (underline added)

1 Workload

2 As claimed, the "workload" is that of the "workload hosted by said node," which was
3 previously detected (i.e., "detecting a node") and which will be reconfigured (i.e., "reconfiguring
4 said node."). Appellants do not disagree that the "traffic information" taught by Maltz could be
5 considered comparable to the claimed "workload" without consideration of the other limitations
6 associated with the term "workload." However, the Examiner's analysis does not establish that
7 this workload was of the identified node. Instead, paragraph [0068] teaches that "traffic
8 information is collected from at least one network element at a POP using a processor at the
9 POP." Thus, the traffic information described by Maltz is not necessarily (i.e., inherently)
10 associated with the detected node. Moreover, the traffic information described by Maltz is not
11 necessarily (i.e., inherently) associated with the node to be reconfigured. Thus, the traffic
12 information of Maltz does not explicitly or inherently teach the claimed "workload hosted by
13 said node" since the traffic information could be of the network, as a whole, or other nodes than
14 that detected and/or configured.

15
16 Retrieving a set of configuration parameters

17 As claimed, the set of configuration parameters are retrieved. Additionally, the set of
18 configuration parameters are associated with the workload. However, referring to the underlined
19 portion, as admitted by the Examiner, Maltz only teaches "[retrieving] traffic/data statistics
20 collected from the network element. The optimal network configuration (i.e., the alleged set of
21 configuration parameters) are not retrieved. Instead, it is calculated.

1 The Examiner asserts that the "network element is retrieving the set of optimal network
2 configuration generated from the traffic data/statistics." This assertion, however, is factually
3 incorrect. The network element does not retrieve the network configuration. Instead, the
4 network element receives the network configuration after the configuration has been sent from
5 the traffic management system (TMS) (see Fig. 2 and lines 11-15 of paragraph [0033] of Maltz).
6 Although the words "receive" and "retrieve" have a similar end result, the manner in which this
7 result is achieved is different. Receiving an item is passive whereas retrieving an item is active.
8 The network element of Maltz does not actively go out and retrieve a set of configuration
9 parameters. Instead, the network element of Maltz passively receives control information sent
10 out by the TMS. Thus, the Examiner has mischaracterized the scope and content of Maltz.

12
13 In response to the arguments presented on page 12, line 10 through page 14, line 4 of the
14 Appeal Brief, the Examiner asserted the following in the last full paragraph on page 10 of the
15 Examiner's Answer:

16 **In reply** to argument (4), as explained in reply to argument (3) above, Maltz teaches the
17 TMS Algorithm generates and outputs optimal network configuration (i.e., producing new
18 generation of configuration parameters) based upon retrieving of traffic data/statistics from the
19 TMS Statistic repository ([0036]). This means the traffic data/statistics such as measurement of
20 the number of bytes that flow out of a line card interface each second retrieved from the repository
21 are used as input parameters for generating optimal network configurations. Thus, Maltz teaches
22 producing a new generation of configuration parameters (generating and outputting optimal
23 network configurations) based upon the retrieved set of configuration parameters (traffic
24 data/statistics retrieved from the repository for used as input to generate configuration, i.e.,
25 "configuration parameters").
26

27 The Examiner's analysis is ignoring the language of the claims. As claimed, "a new generation
28 of configuration parameters [is produced] based upon said retrieved set." Assuming that P = old
29 configuration parameters, P' = new generation of configuration parameters, and T = old traffic

data; T' = new traffic data, the differences between the claimed invention and the teachings of Maltz can be characterized as follows:

$P' = f(P)$ Claimed invention

$P = f(T); P' = f(T')$ Maltz

The Examiner's analysis presumes, without factual evidence, that T' is a function of P (i.e., $T' = f(P)$). On this basis, the Examiner presumes that since P' is a function of T', which is a function of P, therefore P' is inherently a function of P (i.e., new parameters based upon retrieved parameters). However, there is no evidence for this assertion. Traffic is a function of external elements (i.e., demand on the network 210; see lines 16-17 of paragraph [0033]). Thus, the Examiner's inherency argument is factually unsupported.

In response to the arguments presented on page 14, line 7 through page 15, line 15 of the Appeal Brief, the Examiner asserted the following in the first full paragraph on page 11 of the Examiner's Answer:

In reply to argument (5), Maltz teaches using a TMS Algorithm for generating optimal network configuration ([0036]). Maltz further teach other algorithms such as genetic algorithm are suitable ([0049]). Maltz does not explicitly teach producing new generation of configuration parameter using a genetic computing processing. Nozawa teaches producing new generation of configuration parameter as optimization solution using a genetic computing processing (col. 6, line 66-col. 7, line 2; col. 7, lines 26-30; col. 8, lines 19-25). Because both Maltz and Nozawa teaches algorithm for generating parameter as optimization solution, it would have been obvious to one skilled in the art to substitute one algorithm for the other to achieve the predictable result of generating optimization solution (i.e., examiner determines obviousness using the rationale of "simple substitution of one known, equivalent element for another to obtain predictable results" under Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 550 U.S., 82 USPQ2d 1385).

At the outset, Appellants note that the Examiner's "simple substitution" rationale is newly presented. The rationale is not found within either the First or Second Office Actions.

1 On October 10, 2007, the Patent Office issued the "Examination Guidelines for
2 Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR
3 International Co. v. Teleflex Inc.," 73 Fed. Reg. 57,526 (2007) (hereinafter the Examination
4 Guidelines). Section III is entitled "Rationales To Support Rejections Under 35 U.S.C. 103."
5 Within this section is the following quote from the Supreme Court: "rejections on obviousness
6 grounds cannot be sustained by merely conclusory statements; instead there must be some
7 articulated reasoning with some rational underpinning to support the legal conclusion of
8 obviousness." KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn,
9 441 F.3d 977, 988 (Fed. Cir. 2006)).

10
11 Referring to the first column on page 57,529 of the Examination Guidelines for
12 Determining Obviousness, the following is a list of rationales that may be used to support a
13 finding of obviousness under 35 U.S.C. § 103:

14 (A) Combining prior art elements according to known methods to yield
15 predictable results;

16 (B) Simple substitution of one known element for another to obtain
17 predictable results;

18 (C) Use of known technique to improve similar devices (methods, or
19 products) in the same way;

20 (D) Applying a known technique to a known device (method, or product)
21 ready for improvement to yield predictable results;

22 (E) "Obvious to try" - choosing from a finite number of identified,
23 predictable solutions, with a reasonable expectation of success;

24 (F) Known work in one field of endeavor may prompt variations of it for
25 use in either the same field or a different one based on design incentives or other
26 market forces if the variations would have been predictable to one of ordinary
27 skill in the art;

1 (G) Some teaching, suggestion, or motivation in the prior art that would
2 have led one of ordinary skill to modify the prior art reference or to combine prior
3 art reference teachings to arrive at the claimed invention.
4

5 Based upon the Examiner's explicit admission, the Examiner is employing rationale (B).
6 Referring to rationale (B), as discussed on page 57,530 of the Examination Guidelines, the
7 following findings of fact must be articulated by the Examiner:

8 (1) a finding that the prior art contained a device (method, product, etc.)
9 which differed from the claimed device by the substitution of some components
10 (step, element, etc.) with other components;

11 (2) a finding that the substituted components and their functions were
12 known in the art;

13 (3) a finding that one of ordinary skill in the art could have substituted one
14 known element for another, and the results of the substitution would have been
15 predictable; and

16 (4) whatever additional findings based on the *Graham* factual inquiries
17 may be necessary, in view of the facts of the case under consideration, to explain
18 a conclusion of obviousness.
19

20 As already discussed above, the Examiner has not properly performed finding of fact (4) since the
21 Examiner has mischaracterized the scope and content of Maltz.
22

23 Additionally, the Examiner has not and cannot make finding of facts (1) and (3). The
24 difference between Maltz and Nozawa is not the simple substitution of one element for another.
25 Nozawa does not teach detecting a node, identifying a workload, retrieving a set of configuration
26 parameters, producing a new generation of configuration parameters, or reconfiguring a node.
27 Instead, Nozawa is directed to a system of building a network computer system. Building a network

1 computer system is not the same as reconfiguring nodes in a network computer system. As such,
2 Nozawa does not refer to workloads or traffic information or prior configuration parameters. Thus,
3 the difference between Maltz and Nozawa is not the simple substitution of one element for another.
4 Instead, the difference involves pulling a single element from the entirely different process of
5 Nozawa and inserting that element into Maltz.

6
7 Considering these differences, Nozawa is also non-analogous art that cannot be properly
8 considered. Whether a prior art reference is from a nonanalogous art involves (a) determining
9 whether the reference is within the same field of endeavor and (b) determining whether the
10 reference is reasonably pertinent to a known problem in the art. In re Clay, 23 USPQ2d 1058
11 (Fed Cir. 1992). If the prior art is outside the inventor's field of endeavor, the inventor will only
12 be presumed to have knowledge of prior art that is reasonably pertinent to a known need or
13 problem in the field of endeavor. KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82
14 USPQ2d 1385, 1397 (2007). Building a network (i.e., selecting the structures/processes that
15 makes up the network) is very different than reconfiguring a network. The difference is akin to
16 the difference between making a piano and playing a piano. As such, Nozawa is not within the
17 same field of endeavor. The Examiner has also failed to establish that Nozawa is reasonably
18 pertinent to a known problem in the art.

19
20 The Examiner has not and cannot make finding (3) that one of ordinary skill in the art
21 could have substituted one known element for another, and the results of the substitution would
22 have been predictable. The genetic computing process described by Nozawa is used for building
23 a client-server system (see column 13, lines 1-10). Although the Examiner asserts that it would

1 have been obvious "to achieve the predictable result of generating optimization solution," the
2 Examiner's analysis is based upon zero findings of fact. The standard of review applied to
3 findings of fact is the "substantial evidence" standard under the Administrative Procedure Act
4 (APA). See In re Gartside, 203 F.3d 1305, 1315, 53 USPQ2d 1769, 1775 (Fed. Cir. 2000).
5 Since the Examiner has produced neither finding of fact supported by substantial evidence or
6 findings of fact, the Examiner's assertion is not properly based in fact.

For the reasons set forth in the Appeal Brief of November 12, 2008, and for those set forth herein, Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejections under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: March 23, 2009

Respectfully submitted,

/Scott D. Paul/

Scott D. Paul

Registration No. 42,984

Steven M. Greenberg

Registration No. 44,725

Phone: (561) 922-3845

CUSTOMER NUMBER 46320